



**Concepts and Objectives
for
Global Transportation Network 2010**

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Summary

The U.S. Transportation Command (USTRANSCOM) is planning to replace its primary information system, the Global Transportation Network (GTN) with a new system that addresses current technical shortfalls and provides additional capabilities for GTN's user community. The primary goals of this effort are to upgrade the GTN technical architecture, and implement a system that is easier to maintain and is more responsive and flexible than the current system. USTRANSCOM's goals for GTN 2010 include:

- 1) Expansion of GTN's utility as an information and decision aide system to enable direct command and control of transportation assets;
- 2) Design and implementation of a relational database that adheres to Defense Transportation System standards and applies advanced access controls; and,
- 3) The incorporation of design and programming techniques that enhance user flexibility, enable easier adaptation of interfacing system requirements, and provide on-line visibility into data structures and manipulation logic.

AFMC Electronic Systems Center (ESC) will make additional technical information and procurement objectives available to interested contractors. The government expects to award the contract for implementation of GTN 2010 on or about 1 October 2001.

Background

The USTRANSCOM Global Transportation Network (GTN) is an operational automated information system. It presently serves an aggregate community of approximately 6,500 users from a central server location at Scott AFB, IL. A geographically separated but identical server system provides an alternate data source in case of infrastructure failure or during periods of planned maintenance. GTN provides web based user access to an extensive relational database of transportation information that is continually updated from military and commercial transportation tracking systems. GTN clients primarily access the system via the internet.

GTN 2010 Functional Requirements

The current GTN is a near real time global defense transportation information system. It contains schedule, position and transportation status data for cargo shipments and military personnel. As information is updated in more than twenty independent military and commercial transportation tracking systems, relevant data is automatically transmitted to the GTN and becomes available to GTN users. GTN receives the transmitted information, correlates it to related movement data from other systems, and organizes its database to present a unified consistent view of cargo and passenger movement. By using one of several standard and adjustable web browser displays, the GTN user can locate a specific movement of interest, estimate expected arrival times, observe the volume of traffic following the same route, and locate alternative transportation options when necessary. GTN also provides a classified subsystem that stores additional sensitive information available only to cleared users. More than providing "In-Transit Visibility" the GTN system is an important decision-aid for USTRANSCOM operational staff who are responsible for the movement and supply of the U.S. Armed Forces.

GTN 2010 will implement existing GTN functionality and will add new command and control capability. The new system will store and process information about the transportation assets available to USTRANSCOM. By comparing asset location, status, and availability information with movement requirements, the GTN 2010 user will be able to recommend or direct the use of available aircraft, shipping, and motorized transport to rapidly accomplish the USTRANSCOM mission.

GTN 2010 Technical Objectives

The implementation of GTN 2010 is intended to enhance user capability, and improve overall system performance and maintainability while providing all the essential functions of the present system. USTRANSCOM intends to maintain the same two-site (primary, alternate) configuration and to support user access with one or more commercial web browsers. The government expects that GTN 2010 will be hosted on a new server suite, and will employ modern database and software techniques to address several specific technical objectives, including:

1. Design and structural implementation of a relational database employing the DoD Transportation Logical Data Model;
2. The application of data independence techniques that separate logic from the data so that applications can be more easily maintained;
3. Improvement of the data interchange processes so that interfacing system changes can be accommodated without extensive reprogramming;
4. Implementation of a flexible user interface that allows user generated queries and user adjustable display formats; and,
5. The application of approaches to data identification, storage and querying that permit enhanced “system understanding” of the user request, resulting in greater system reliability and consistency.

A more complete description of system technical requirements including further information about these objectives is provided in the Technical Requirements Document for GTN 2010.

GTN 2010 Acquisition

The government intends to award a contract for the implementation of GTN 2010 at the start of FY2002. Prior to that time the government may, at its discretion, solicit information and implementation advice from interested contractors. The government expects the acquisition to be a multi-year spiral development effort that will be conducted in cooperation with and under the direction of USTRANSCOM program management and technical support staff.